METHODS AND APPARATA FOR HIGHLY AUTOMATED QUALITY ASSURANCE OF BUILDING CONSTRUCTION PROJECTS

Abstract

Tracking forms allow tracking of the completion status and implemented quality standards of a building construction project (i.e., one or more of the construction stages of planning, design, construction, startup, turnover, and operations). A tracking form is prepared for one or more tasks requiring completion at the construction site; as an example, the delivery of a variable air volume (VAV) box, its installation, its controls start-up, and its tuning could all be treated as separate tasks on separate tracking forms, or could instead be combined as separate tasks on a single tracking form. Each task is assigned two components on its tracking form: a quality control indicator form, which contains one or more quality control indicators indicating whether certain quality standards are met; and a completion indicator, which indicates the completion status of a task. The completion status may be a discrete binary value (i.e., either completed or incomplete), or may instead be a continuous value (e.g., a percentage value of completion, or a description of the work done towards completing the overall task). Preferably, the workers performing the tasks complete each task's quality control indicator form and completion indicator during design and construction as milestones relating to the task are completed (e.g., when the task is completed), or at the end of some predetermined time period (such as one day of worktime). The completion indicators relating to the tasks are logged so that the completion status of the project may be monitored, and the information recorded on the quality control indicator forms may be sampled and checked to verify that construction quality standards are being met.